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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,110	04/19/2006	Gregory I. Frost	DELIA1330-1	9011

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EXAMINER	
CHOWDHURY, IQBAL HOSSAIN	

ART UNIT	PAPER NUMBER
1652	

MAIL DATE	DELIVERY MODE
03/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,110	FROST ET AL.	
	Examiner	Art Unit	
	IQBAL H. CHOWDHURY	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) *2,3,10,11,16-21,23-49 and 51-56* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1, 4-9, 12-15, 22 and 50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-56 are currently pending in the instant application.

This application is a 371 of PCT/US03/40090.

The preliminary amendment filed on June 13, 2005, amending claim 23 is acknowledged.

Election/Restriction

Applicant's election with traverse of Group I, Claims 1-22 and 50, drawn to an isolated polypeptide chondroitinase glycoprotein (CHASEGP) and a composition comprising said polypeptide, and protein of SEQ ID NO: 6 and nucleic acid encoding SEQ ID NO: 6, in the communication filed on December 3, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the Restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). It is to be mentioned here that SEQ ID NO: 6 is not a species but a specific invention as an independent and distinct protein.

Claims 2-3, 10-11, 16, 23-49 and 51-56 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention. Claims 17-21 are also withdrawn because claims encompass mutants and variants of SEQ ID NO: 6 because each of the mutants and variants are structurally independent and distinct protein. Besides, the mutants and variants do not share any special technical feature with wild type chondroitinase protein, as wild type chondroitinase protein is known in the art (see previous Office action).

Claims 1, 4-9, 12-15, 22, and 50 are under consideration and will be examined herein.

Priority

Acknowledgement is made of applicants claim for priority of provisional application 60/433,532 filed on 12/16/2002.

Information Disclosure Statement

There is no information disclosure statement (IDS) with this application.

Drawings

There is no drawing with this application.

Claim Objections

Claims 1, 9, 13-14, 22, and 50 are objected to in the recitation of "CHASEGP" as abbreviations should not be used without at least once fully setting forth what they are used for. Appropriate correction is required.

Claim 4 is objected to in the recitation of "PNGase" as abbreviations should not be used without at least once fully setting forth what they are used for. Appropriate correction is required.

Claim 8 is objected to in the recitation of "sialylic acid", which is not a common expression that should be "sialic acid". Appropriate correction is required.

Claims 4-9 and 14 are objected to in the recitation of "claim-1", which should be "claim 1". Appropriate correction is required.

Claim 14 is objected to in the recitation of "as described in SEQ ID NO: 6", which should

be "as set forth in SEQ ID NO: 6". Appropriate correction is required.

Claim 9 is objected to in the recitation "A substantially purified glycoprotein", which should be "The substantially purified glycoprotein". Appropriate correction is required.

Claim 12 is objected to in the recitation "A polypeptide", which should be "The polypeptide". Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 9, and 12-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 9 and 12-15 recite "A ---- chondroitinase glycoprotein" or "A polypeptide", which reads on a naturally occurring chondroitinase glycoprotein or polypeptide. Naturally occurring polypeptide is not patentable.

In the absence of the hand of man, naturally occurring nucleic acids and /or proteins are considered non-statutory subject matter. *Diamond and Chakrabarty*, 206 USPQ 193 (1980). This rejection may be overcome by amending the claims to contain wording such as "An isolated glycoprotein or polypeptide". For examination purpose the claim is read as such.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 4-9, 12-15, 22 and 50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite and vague for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention. Claims 1, 9, 13, 22 and 50 are indefinite in the recitation of "substantially purified or pure" as it is unclear how purified or pure of a polypeptide must be to be encompassed by the phrase "substantially purified or pure". While page 31 attempts to define "substantially pure", however, the description is not a clear definition. Therefore, it is not clear to the Examiner as to how much pure of the protein is encompassed in the above phrase. Accordingly, claims 4-8, 12, 14-15, and 17-21 are rejected, as they depend on claim 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4-9, 13 and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 4-9, 13, 22 and 50 are directed to a soluble chondroitinase glycoprotein and a composition comprising said chondroitinase glycoprotein.

The Court of Appeals for the Federal Circuit has recently held that a "written description of an invention involving a chemical genus, like a description of a chemical species, 'requires a precise definition, such as by structure, formula [or] chemical name,' of the claimed subject matter sufficient to distinguish it from other materials." University of California v. Eli Lilly and

Co., 1997 U.S. App. LEXIS 18221, at *23, quoting Fiers v. Revel, 25 USPQ2d 1601, 1606 (Fed. Cir. 1993). To fully describe a genus of genetic material, which is a chemical compound, applicants must (1) fully describe at least one species of the claimed genus sufficient to represent said genus whereby a skilled artisan, in view of the prior art, could predict the structure of other species encompassed by the claimed genus and (2) identify the common characteristics of the claimed molecules, e.g., structure, physical and/or chemical characteristics, functional characteristics when coupled with a known or disclosed correlation between function and structure, or a combination of these (paraphrased from *Enzo Biochemical*).

Thus, claims 1, 4-9, 13, 22 and 50 are directed to any chondroitinase glycoprotein having any structure isolated from any source and a composition comprising said chondroitinase glycoprotein polypeptide.

Claims are thus drawn to any chondroitinase glycoprotein isolated from any source and a composition comprising said chondroitinase glycoprotein, wherein said proteins structures are not fully described in the specification. No information, beyond the characterization of a protein having activity of degrading chondroitin, which would indicate that applicants had possession of the claimed genus of any chondroitinase glycoprotein and a composition comprising said chondroitinase. The specification does not also contain any disclosure of the structure of all the mutants or variants of any chondroitinase glycoprotein and a composition comprising said chondroitinase glycoprotein in the claims. The genus of proteins (any chondroitinase glycoprotein) as claimed is a large variable genus including many mutants and variants, which can have wide variety of structures. Therefore, many structurally unrelated proteins are encompassed within the scope of the claims. The specification discloses the structure of only

three representative species of the claimed genus (SEQ ID NO: 1, 2 and 6), which is insufficient to put one of skill in the art in possession of the attributes and features of all species within the claimed genus. Therefore, one skilled in the art cannot reasonably conclude that applicant had possession of the claimed invention at the time the instant application was filed.

Applicant is referred to the revised guidelines concerning compliance with the written description requirement of U.S.C. 112, first paragraph, published in the Official Gazette and also available at www.uspto.gov.

Claims 1, 4-9, 12-13, 15, 22 and 50 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a chondroitinase glycoprotein of SEQ ID NO: 6 having chondroitinase domain and a composition comprising said chondroitinase glycoprotein of SEQ ID NO: 6, wherein the encoded nucleic acids can hybridizes under high stringency condition to full length of SEQ ID NO: 3 or 5, does not reasonably provide enablement for any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least any one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the claimed invention commensurate in scope with these claims.

Factors to be considered in determining whether undue experimentation is required are summarized in In re Wands (858 F.2d 731,737, 8 USPQ2nd 1400 (Fed. Cir. 1988)) as follows:

(1) quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence and absence of working examples, (4) the nature of the invention, (5) the state of prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. The factors, which have, lead the Examiner to conclude that the specification fails to teach how to make and/or use the claimed invention without undue experimentation, are addressed below:

The breadth of the claims:

Claims 1, 4-9, 12-13, 15, 22 and 50 are so broad as to encompass any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure.

The scope of the claims is not commensurate with the enablement provided by the disclosure with regard to the extremely large number of proteins having chondroitin degrading activity, which includes many mutants and variants broadly encompassed by the claims. However, in this case the disclosure is limited to the nucleotide and encoded amino acid sequence of only three chondroitinase glycoproteins i.e. SEQ ID NO: 1, 2 and 6.

The quantity of experimentation required practicing the claimed invention based on the teachings of the specification:

While methods of generating or isolating variants of a polypeptide were well known in

the art at the time of invention, it is not routine in the art to screen by trial and error process for (1) any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure, (2) an essentially infinite number of mutations of any chondroitinase glycoprotein amino acid sequence. The amino acids modifications can be made with a reasonable expectation of success in obtaining the desired activity/utility are limited in any protein and the result of such modifications is unpredictable. In addition, one skilled in the art would expect any tolerance to modification for a given protein to diminish with each further and additional modification, e.g. multiple point mutations or substitutions. In addition, one skilled in the art would expect any tolerance to modification for a given protein to diminish with each further and additional modification.

The state of prior art, the relative skill of those in the art, and the predictability or unpredictability of the art:

The amino acid sequence of a polypeptide determines its structural and functional properties. While the specification discloses three chondroitinase glycoprotein, neither the specification nor the art provide a correlation between structure and function such that one of skill in the art can envision the structure of any chondroitinase glycoprotein or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high

stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least any one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein as claimed. The art clearly teaches that modification of a protein's amino acid sequence to obtain the desired activity without any guidance/knowledge as to which amino acids in a protein are tolerant of modification and which ones are conserved is highly unpredictable. At the time of the invention there was a high level of unpredictability associated with altering a polypeptide sequence with an expectation that the polypeptide will maintain the desired activity. For example, Branden et al. (1991) teach that (1) protein engineers are frequently surprised by the range of effects caused by single mutations that they hoped would change only one specific and simple property in enzymes, (2) the often surprising results obtained by experiments where single mutations are made reveal how little is known about the rules of protein stability, and (3) the difficulties in designing de novo stable proteins with specific functions. The teachings of Branden et al. are further supported by the teachings of Witkowski et al. (1999) and Seffernick et al. (2001), where it is shown that even small amino acid changes result in enzymatic activity changes.

The amount of direction or guidance presented and the existence of working examples:

The specification discloses a chondroitinase glycoprotein of SEQ ID NO: 6 having chondroitinase domain and a composition comprising said chondroitinase glycoprotein of SEQ ID NO: 6, wherein the encoded nucleic acids can hybridizes under high stringency condition to full length sequence of SEQ ID NO: 3 or 5. However, the specification fails to provide any clue as to the structural elements required in any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any

polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure or which are the structural elements in said proteins known in the art that are essential for successfully practice the claimed invention. No correlation between structure and function has been presented.

The specification does not support the broad scope of the claims which encompass any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure because the specification does **not** establish: (A) regions of the protein structure which may be modified without affecting chondroitinase activity and; (B) the general tolerance of chondroitinase glycoprotein to modification and extent of such tolerance; (C) a rational and predictable scheme for modifying any chondroitinase glycoprotein amino acid residues with an expectation of obtaining the desired biological function; and (D) the specification provides insufficient guidance as to which of the essentially infinite possible choices is likely to be successful.

Applicants have not provided sufficient guidance to enable one of ordinary skill in the art **to make and/or use** the claimed invention in a manner reasonably correlated with the scope of

the claims broadly including any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure. The scope of the claims must bear a reasonable correlation with the scope of enablement (In re Fisher, 166 USPQ 19 24 (CCPA 1970)). Without sufficient guidance, determination of a chondroitinase glycoprotein or a chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising said chondroitinase glycoprotein having the desired biological characteristics is unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. See In re Wands 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-9, 12-15, 22 and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Bodary et al. (WO 2004/028479-A2, publication 4/8/2004, claim priority of US application 60/414,006 filed on 9/25/2002). Instant claims drawn to any chondroitinase glycoprotein having any structure or any chondroitinase glycoprotein having any catalytically active portion thereof or any polypeptide having chondroitinase domain, wherein the encoded nucleic acids hybridizes under high stringency conditions at least 70% of its full length of nucleotides 726-1995 in SEQ ID NO: 3 or SEQ ID NO: 5 or at least one domain thereof or any catalytically active portion of the domain and a composition comprising any chondroitinase glycoprotein having any structure.

Bodary et al. disclose a protein, which is 100% identical to the SEQ ID NO: 6 of the instant application (see sequence alignment), inherently a chondroitinase glycoprotein. Bodary et al. also teach a composition comprising said protein. Since, the protein of Bodary et al. is 100% identical to SEQ IDNO: 6 of the instant application, said protein would inherently comprise the chondroitinase domain and catalytic domain. Bodary et al. further disclose nucleic acid sequence encoding said protein which is 100% identical to SEQ ID NO: 3 and 5 of the instant application (see sequence alignment). The nucleic acid sequence of the Bodary et al., which is 100% identical to SEQ ID NO: 3 and 5, would hybridize with the recited sequences of SEQ ID NO: 3 and 5 or any fragments thereof of the instant application. Bodary et al. furthermore, disclose cloning the gene encoding protein in an expression vector and express in E. coli and CHO mammalian cells, followed by purification. Because, the protein is expressed in mammalian CHO cells, the protein would be glycosylated, wherein asparagine residue is the common

glycosylation site, wherein said glycosidic bond would be inherently sensitive to PNGase, since, PNGase hydrolyze glycosidic bond. In mammalian cells, when the protein is glycosylated, the glycosyl residues usually comprise complex sugar molecules.

Because the glycosylated protein of the instant application (claims 7 and 8) and the glycosylated protein (which is expressed in the mammalian CHO cells) of the reference is one and the same, Examiner takes the position that the glycosylated protein disclosed in the reference inherently has hybrid type of sugar molecule would terminated with sialic acid molecule as claimed in claim 7-8. Since the Office does not have the facilities for examining and comparing applicants' glycosylated protein with the glycosylated protein disclosed by the prior art, the burden is on the applicant to show a novel or unobvious difference between the claimed product (i.e. glycosylated) and the product of the prior art (i.e., glycosylated). See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *In re Fitzgerald* et al., 205 USPQ 594. Therefore, Bodary et al. anticipate claims 1, 4-9, 12-15, 22 and 50 of the instant application.

Conclusion

Status of the claims:

Claims 1-56 are pending.

Claims 2-3, 10-11, 16-21, 23-49, 51-56 are withdrawn.

Claims 1, 4-9, 12-15, 22 and 50 are rejected.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iqbal Chowdhury whose telephone number is 571-272-8137. The examiner can normally be reached on 9:00-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 703-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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#3

<!--StartFragment-->RESULT 1
ADN05873
ID ADN05873 standard; cDNA; 2414 BP.
XX
AC ADN05873;
XX
DT 11-JUN-2007 (revised)
DT 01-JUL-2004 (first entry)
XX
DE Antipsoriatic cDNA sequence #1168.
XX
KW ds; gene; antipsoriatic; gene therapy; psoriasis; diagnosis.
XX
OS Homo sapiens.
XX
PN WO2004028479-A2.
XX
PD 08-APR-2004.
XX
PF 25-SEP-2003; 2003WO-US030907.
XX
PR 25-SEP-2002; 2002US-0414006P.
XX
PA (GETH) GENENTECH INC.
XX
PI Bodary S, Clark H, Jackman J, Schoenfeld J, Williams PM, Wood WI;
PI Wu TD;
XX
DR WPI; 2004-305105/28.
DR P-PSDB; ADN05874.
DR PC:NCBI; gi6912427.
DR PC_ENCPRO:NCBI; gi6912428.
XX
PT New PRO nucleic acid or polypeptide, useful for preparing a
PT pharmaceutical composition for diagnosing or treating psoriasis in a
PT mammal.
XX
PS Claim 1; SEQ ID NO 2268; 3069pp; English.
XX
CC The invention relates to novel polynucleotide and polypeptides for
CC treating psoriasis or a sequence having at least 80% identity to the
CC above sequences. The nucleic acid is useful for preparing a composition
CC for diagnosing or treating psoriasis in a mammal. This sequence
CC corresponds to one of the polynucleotides of the invention.
CC
CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed
CC information from BOND.
XX
SQ Sequence 2414 BP; 672 A; 475 C; 504 G; 763 T; 0 U; 0 Other;

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  Best Local Similarity 100.0%; Pred. No. 0;
  Matches 1446; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 ATGAAAGTATTATCTGAAGGACAGTTAAAGCTTTGTGTTGTTCAACCAGTACATCTCACT 60
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Qy   61 TCATGGCTCCTTATATTTTTTATTCTAAAGTCTATCTCTTGTCTAAAACCTGCTCGACTT 120
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Db   702 TCATGGCTCCTTATATTTTTTATTCTAAAGTCTATCTCTTGTCTAAAACCTGCTCGACTT 761

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Qy       121 CCAATTTATCAAAGGAAACCTTTTATAGCTGCTTGGAATGCTCCAACAGATCAGTGTTTG 180
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       762 CCAATTTATCAAAGGAAACCTTTTATAGCTGCTTGGAATGCTCCAACAGATCAGTGTTTG 821

Qy       181 ATAAAATATAATTTAAGACTAAATTTGAAAATGTTTCCTGTGATTGGAAGCCCACTGGCC 240
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Db       822 ATAAAATATAATTTAAGACTAAATTTGAAAATGTTTCCTGTGATTGGAAGCCCACTGGCC 881

Qy       241 AAGGCCAGGGGGCAAAATGTCACTATATTTTATGTCAACAGATTGGGATACTATCCGTGG 300
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Db       882 AAGGCCAGGGGGCAAAATGTCACTATATTTTATGTCAACAGATTGGGATACTATCCGTGG 941

Qy       301 TATACATCACAGGGGGTCCCCATTAATGGAGGTCTCCCACAGAACATAAGTTTACAAGTA 360
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       942 TATACATCACAGGGGGTCCCCATTAATGGAGGTCTCCCACAGAACATAAGTTTACAAGTA 1001

Qy       361 CATCTGGAAAAAGCTGACCAAGATATTAATTATTACATCCCTGCTGAAGATTTCAGTGGA 420
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1002 CATCTGGAAAAAGCTGACCAAGATATTAATTATTACATCCCTGCTGAAGATTTCAGTGGA 1061

Qy       421 CTTGCTGTTATAGATTGGGAATATTGGAGACCACAGTGGGCCCGGAACTGGAACTCAAAA 480
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1062 CTTGCTGTTATAGATTGGGAATATTGGAGACCACAGTGGGCCCGGAACTGGAACTCAAAA 1121

Qy       481 GATGTTTACAGACAGAAGTCAAGAAAGCTTATTTCCGATATGGGAAAGAATGTATCAGCT 540
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1122 GATGTTTACAGACAGAAGTCAAGAAAGCTTATTTCCGATATGGGAAAGAATGTATCAGCT 1181

Qy       541 ACCGATATTGAATATTTAGCCAAAGTGACCTTTGAAGAAAGTGCAAAAGCTTTCATGAAG 600
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1182 ACCGATATTGAATATTTAGCCAAAGTGACCTTTGAAGAAAGTGCAAAAGCTTTCATGAAG 1241

Qy       601 GAAACCATCAAATTGGGAATTAAGAGCCGACCCAAAGGCCTTTGGGGTTATTATTTATAT 660
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1242 GAAACCATCAAATTGGGAATTAAGAGCCGACCCAAAGGCCTTTGGGGTTATTATTTATAT 1301

Qy       661 CCTGATTGCCACAATTATAACGTTTATGCCCCAAACTACTCTGGGTCATGCCCAGAAGAC 720
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1302 CCTGATTGCCACAATTATAACGTTTATGCCCCAAACTACTCTGGGTCATGCCCAGAAGAC 1361

Qy       721 GAAGTCTTGAGGAACAATGAGCTCTCTTGGCTCTGGAACAGCAGTGCTGCTTTATATCCT 780
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1362 GAAGTCTTGAGGAACAATGAGCTCTCTTGGCTCTGGAACAGCAGTGCTGCTTTATATCCT 1421

Qy       781 TCTATCTGTGTCTGGAAATCCCTTGGAGACAGTGAAAACATTTTGCGCTTCTCCAAATTT 840
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1422 TCTATCTGTGTCTGGAAATCCCTTGGAGACAGTGAAAACATTTTGCGCTTCTCCAAATTT 1481

Qy       841 CGGGTGCATGAATCCATGAGGATCTCCACCATGACATCTCATGATTATGCTCTGCCTGTA 900
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1482 CGGGTGCATGAATCCATGAGGATCTCCACCATGACATCTCATGATTATGCTCTGCCTGTA 1541

Qy       901 TTTGTCTACACAAGGCTAGGGTACAGAGATGAACCTTTATTTTTCCTTTCTAAGCAAGAT 960
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1542 TTTGTCTACACAAGGCTAGGGTACAGAGATGAACCTTTATTTTTCCTTTCTAAGCAAGAT 1601

Qy       961 CTAGTCAGCACCATAGGAGAAAGTGCTGCCTTGGGAGCTGCAGGCATTGTTATTTGGGGA 1020
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1602 CTAGTCAGCACCATAGGAGAAAGTGCTGCCTTGGGAGCTGCAGGCATTGTTATTTGGGGA 1661
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Qy       1021 GACATGAATTTAACTGCATCCAAGGCCAACTGTACAAAGGTGAAGCAGTTTGTGAGTTCT 1080
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1662 GACATGAATTTAACTGCATCCAAGGCCAACTGTACAAAGGTGAAGCAGTTTGTGAGTTCT 1721

Qy       1081 GATTTAGGGAGCTACATAGCCAATGTGACCAGAGCTGCTGAGGTATGCAGCCTTCACCTC 1140
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1722 GATTTAGGGAGCTACATAGCCAATGTGACCAGAGCTGCTGAGGTATGCAGCCTTCACCTC 1781

Qy       1141 TGCAGGAACAATGGCAGGTGCATAAGGAAGATGTGGAACGCGCCCAGTTACCTTCACTTG 1200
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1782 TGCAGGAACAATGGCAGGTGCATAAGGAAGATGTGGAACGCGCCCAGTTACCTTCACTTG 1841

Qy       1201 AACCCTGCAAGTTACCACATAGAGGCCTCTGAGGACGGGGAGTTTACTGTGAAAGGAAAA 1260
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1842 AACCCTGCAAGTTACCACATAGAGGCCTCTGAGGACGGGGAGTTTACTGTGAAAGGAAAA 1901

Qy       1261 GCATCTGATACAGACCTGGCAGTGATGGCAGATACATTTTCCTGTCATTGTTATCAGGGA 1320
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1902 GCATCTGATACAGACCTGGCAGTGATGGCAGATACATTTTCCTGTCATTGTTATCAGGGA 1961

Qy       1321 TATGAAGGAGCTGATTGCAGAGAAATAAAGACGGCTGATGGCTGCTCTGGGGTTTCCCCT 1380
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1962 TATGAAGGAGCTGATTGCAGAGAAATAAAGACGGCTGATGGCTGCTCTGGGGTTTCCCCT 2021

Qy       1381 TCTCCTGGTTCACTAATGACACTTTGTCTACTGCTTTTAGCAAGTTATCGAAGCATTCAG 1440
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       2022 TCTCCTGGTTCACTAATGACACTTTGTCTACTGCTTTTAGCAAGTTATCGAAGCATTCAG 2081

Qy       1441 TTGTGA 1446
             ||||||
Db       2082 TTGTGA 2087
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<!--EndFragment-->

#5

<!--StartFragment-->RESULT 2
ADN05873
ID ADN05873 standard; cDNA; 2414 BP.
XX
AC ADN05873;
XX
DT 11-JUN-2007 (revised)
DT 01-JUL-2004 (first entry)
XX
DE Antipsoriatic cDNA sequence #1168.
XX
KW ds; gene; antipsoriatic; gene therapy; psoriasis; diagnosis.
XX
OS Homo sapiens.
XX
PN WO2004028479-A2.
XX
PD 08-APR-2004.
XX
PF 25-SEP-2003; 2003WO-US030907.
XX
PR 25-SEP-2002; 2002US-0414006P.
XX
PA (GETH) GENENTECH INC.
XX
PI Bodary S, Clark H, Jackman J, Schoenfeld J, Williams PM, Wood WI;
PI Wu TD;
XX
DR WPI; 2004-305105/28.
DR P-PSDB; ADN05874.
DR PC:NCBI; gi6912427.
DR PC_ENCPRO:NCBI; gi6912428.
XX
PT New PRO nucleic acid or polypeptide, useful for preparing a
PT pharmaceutical composition for diagnosing or treating psoriasis in a
PT mammal.
XX
PS Claim 1; SEQ ID NO 2268; 3069pp; English.
XX
CC The invention relates to novel polynucleotide and polypeptides for
CC treating psoriasis or a sequence having at least 80% identity to the
CC above sequences. The nucleic acid is useful for preparing a composition
CC for diagnosing or treating psoriasis in a mammal. This sequence
CC corresponds to one of the polynucleotides of the invention.
CC
CC Revised record issued on 11-JUN-2007 : Enhanced with precomputed
CC information from BOND.
XX
SQ Sequence 2414 BP; 672 A; 475 C; 504 G; 763 T; 0 U; 0 Other;

  Query Match   100.0%; Score 1269; DB 12; Length 2414;
  Best Local Similarity   100.0%; Pred. No. 0;
  Matches 1269; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

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Qy          1 CTAAAACCTGCTCGACTTCCAATTTATCAAAGGAAACCTTTTATAGCTGCTTGGAATGCT 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        744 CTAAAACCTGCTCGACTTCCAATTTATCAAAGGAAACCTTTTATAGCTGCTTGGAATGCT 803

Qy         61 CCAACAGATCAGTGTTTGATAAAATATAATTTAAGACTAAATTTGAAAATGTTTCCTGTG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        804 CCAACAGATCAGTGTTTGATAAAATATAATTTAAGACTAAATTTGAAAATGTTTCCTGTG 863
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Qy       121 ATTGGAAGCCCACTGGCCAAGGCCAGGGGGCAAAATGTCACTATATTTTATGTCAACAGA 180
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       864 ATTGGAAGCCCACTGGCCAAGGCCAGGGGGCAAAATGTCACTATATTTTATGTCAACAGA 923

Qy       181 TTGGGATACTATCCGTGGTATACATCACAGGGGGTCCCCATTAATGGAGGTCTCCCACAG 240
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       924 TTGGGATACTATCCGTGGTATACATCACAGGGGGTCCCCATTAATGGAGGTCTCCCACAG 983

Qy       241 AACATAAGTTTACAAGTACATCTGGAAAAAGCTGACCAAGATATTAATTATTACATCCCT 300
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       984 AACATAAGTTTACAAGTACATCTGGAAAAAGCTGACCAAGATATTAATTATTACATCCCT 1043

Qy       301 GCTGAAGATTTCAGTGGACTTGCTGTTATAGATTGGGAATATTGGAGACCACAGTGGGCC 360
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1044 GCTGAAGATTTCAGTGGACTTGCTGTTATAGATTGGGAATATTGGAGACCACAGTGGGCC 1103

Qy       361 CGGAACTGGAACTCAAAAGATGTTTACAGACAGAAGTCAAGAAAGCTTATTTCCGATATG 420
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1104 CGGAACTGGAACTCAAAAGATGTTTACAGACAGAAGTCAAGAAAGCTTATTTCCGATATG 1163

Qy       421 GGAAAGAATGTATCAGCTACCGATATTGAATATTTAGCCAAAGTGACCTTTGAAGAAAGT 480
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1164 GGAAAGAATGTATCAGCTACCGATATTGAATATTTAGCCAAAGTGACCTTTGAAGAAAGT 1223

Qy       481 GCAAAAGCTTTCATGAAGGAAACCATCAAATTGGGAATTAAGAGCCGACCCAAAGGCCTT 540
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1224 GCAAAAGCTTTCATGAAGGAAACCATCAAATTGGGAATTAAGAGCCGACCCAAAGGCCTT 1283

Qy       541 TGGGGTTATTATTTATATCCTGATTGCCACAATTATAACGTTTATGCCCCAAACTACTCT 600
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1284 TGGGGTTATTATTTATATCCTGATTGCCACAATTATAACGTTTATGCCCCAAACTACTCT 1343

Qy       601 GGGTCATGCCCAGAAGACGAAGTCTTGAGGAACAATGAGCTCTCTTGGCTCTGGAACAGC 660
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1344 GGGTCATGCCCAGAAGACGAAGTCTTGAGGAACAATGAGCTCTCTTGGCTCTGGAACAGC 1403

Qy       661 AGTGCTGCTTTATATCCTTCTATCTGTGTCTGGAAATCCCTTGGAGACAGTGAAAACATT 720
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1404 AGTGCTGCTTTATATCCTTCTATCTGTGTCTGGAAATCCCTTGGAGACAGTGAAAACATT 1463

Qy       721 TTGCGCTTCTCCAAATTTCGGGTGCATGAATCCATGAGGATCTCCACCATGACATCTCAT 780
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1464 TTGCGCTTCTCCAAATTTCGGGTGCATGAATCCATGAGGATCTCCACCATGACATCTCAT 1523

Qy       781 GATTATGCTCTGCCTGTATTTGTCTACACAAGGCTAGGGTACAGAGATGAACCTTTATTT 840
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1524 GATTATGCTCTGCCTGTATTTGTCTACACAAGGCTAGGGTACAGAGATGAACCTTTATTT 1583

Qy       841 TTCCTTTCTAAGCAAGATCTAGTCAGCACCATAGGAGAAAGTGCTGCCTTGGGAGCTGCA 900
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1584 TTCCTTTCTAAGCAAGATCTAGTCAGCACCATAGGAGAAAGTGCTGCCTTGGGAGCTGCA 1643

Qy       901 GGCATTGTTATTTGGGGAGACATGAATTTAACTGCATCCAAGGCCAACTGTACAAAGGTG 960
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1644 GGCATTGTTATTTGGGGAGACATGAATTTAACTGCATCCAAGGCCAACTGTACAAAGGTG 1703

Qy       961 AAGCAGTTTGTGAGTTCTGATTTAGGGAGCTACATAGCCAATGTGACCAGAGCTGCTGAG 1020
            ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      1704 AAGCAGTTTGTGAGTTCTGATTTAGGGAGCTACATAGCCAATGTGACCAGAGCTGCTGAG 1763
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Qy       1021 GTATGCAGCCTTCACCTCTGCAGGAACAATGGCAGGTGCATAAGGAAGATGTGGAACGCG 1080
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1764 GTATGCAGCCTTCACCTCTGCAGGAACAATGGCAGGTGCATAAGGAAGATGTGGAACGCG 1823

Qy       1081 CCCAGTTACCTTCACTTGAACCCTGCAAGTTACCACATAGAGGCCTCTGAGGACGGGGAG 1140
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1824 CCCAGTTACCTTCACTTGAACCCTGCAAGTTACCACATAGAGGCCTCTGAGGACGGGGAG 1883

Qy       1141 TTTACTGTGAAAGGAAAAGCATCTGATACAGACCTGGCAGTGATGGCAGATACATTTTCC 1200
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1884 TTTACTGTGAAAGGAAAAGCATCTGATACAGACCTGGCAGTGATGGCAGATACATTTTCC 1943

Qy       1201 TGTCATTGTTATCAGGGATATGAAGGAGCTGATTGCAGAGAAATAAAGACGGCTGATGGC 1260
             ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1944 TGTCATTGTTATCAGGGATATGAAGGAGCTGATTGCAGAGAAATAAAGACGGCTGATGGC 2003

Qy       1261 TGCTCTGGG 1269
             |||||||||
Db       2004 TGCTCTGGG 2012

<!--EndFragment-->
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#6

<!--StartFragment-->RESULT 2
ADN05874
ID ADN05874 standard; protein; 481 AA.
XX
AC ADN05874;
XX
DT 01-JUL-2004 (first entry)
XX
DE Antipsoriatic protein sequence #1100.
XX
KW antipsoriatic; gene therapy; psoriasis; diagnosis.
XX
OS Homo sapiens.
XX
PN WO2004028479-A2.
XX
PD 08-APR-2004.
XX
PF 25-SEP-2003; 2003WO-US030907.
XX
PR 25-SEP-2002; 2002US-0414006P.
XX
PA (GETH) GENENTECH INC.
XX
PI Bodary S, Clark H, Jackman J, Schoenfeld J, Williams PM, Wood WI;
PI Wu TD;
XX
DR WPI; 2004-305105/28.
DR N-PSDB; ADN05873.
XX
PT New PRO nucleic acid or polypeptide, useful for preparing a
PT pharmaceutical composition for diagnosing or treating psoriasis in a
PT mammal.
XX
PS Claim 9; SEQ ID NO 2269; 3069pp; English.
XX
CC The invention relates to novel polynucleotide and polypeptides for
CC treating psoriasis or a sequence having at least 80% identity to the
CC above sequences. The nucleic acid is useful for preparing a composition
CC for diagnosing or treating psoriasis in a mammal. This sequence
CC corresponds to one of the polypeptides of the invention.
XX
SQ Sequence 481 AA;

Query Match 100.0%; Score 2284; DB 8; Length 481;
Best Local Similarity 100.0%; Pred. No. 8.6e-207;
Matches 423; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 LKPARLPIYQRKPFIAAWNAPTDQCLIKYNLRLNLKMFPVIGSPLAKARGQNVTIFYVNR 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         35 LKPARLPIYQRKPFIAAWNAPTDQCLIKYNLRLNLKMFPVIGSPLAKARGQNVTIFYVNR 94

Qy         61 LGYYPWYTSQGVPINGGLPQNISLQVHLEKADQDINYYIPAEDFSGLAVIDWEYWRPQWA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         95 LGYYPWYTSQGVPINGGLPQNISLQVHLEKADQDINYYIPAEDFSGLAVIDWEYWRPQWA 154

Qy        121 RNWNSKDVYRQKSRKLISDMGKNVSATDIEYLAKVTFEESAKAFMKETIKLGIKSRPKGL 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        155 RNWNSKDVYRQKSRKLISDMGKNVSATDIEYLAKVTFEESAKAFMKETIKLGIKSRPKGL 214

Qy        181 WGYYLYPDCHNYNVYAPNYSGSCPEDEVLRNNELSWLWNSSAALYPSICVWKSLGDSENI 240
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        215 WGYYLYPDCHNYNVYAPNYSGSCPEDEVLRNNELSWLWNSSAALYPSICVWKSLGDSENI 274

Qy        241 LRFSKFRVHESMRISTMTSHDYALPVFVYTRLGYRDEPLFFLSKQDLVSTIGESAALGAA 300
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        275 LRFSKFRVHESMRISTMTSHDYALPVFVYTRLGYRDEPLFFLSKQDLVSTIGESAALGAA 334

Qy        301 GIVIWGDMNLTASKANCTKVKQFVSSDLGSYIANVTRAAEVCSLHLCRNNGRCIRKMWNA 360
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        335 GIVIWGDMNLTASKANCTKVKQFVSSDLGSYIANVTRAAEVCSLHLCRNNGRCIRKMWNA 394

Qy        361 PSYLHLNPASYHIEASEDGEFTVKGKASDTDLAVMADTFSCHCYQGYEGADCREIKTADG 420
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        395 PSYLHLNPASYHIEASEDGEFTVKGKASDTDLAVMADTFSCHCYQGYEGADCREIKTADG 454

Qy        421 CSG 423
                |||
Db        455 CSG 457
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